UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,564	03/20/2001	Michael Scheetz	10006617-1	2711

7590	04/11/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER
FIELDS, COURTNEY D

ART UNIT	PAPER NUMBER
2137	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr>
<td rowspan="2" style="text-align:center;vertical-align:middle">Office Action Summary</td>
<td colspan="2">Application No.</td>
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<td colspan="2">09/813,564</td>
<td colspan="2">SCHEETZ ET AL.</td>
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<td>Courtney D. Fields</td>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 November 2004_.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-23_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-23_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 November 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s) None AC

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

1.   Claims 21-23 have been added.

2.   Claims 1-3,6,9-10, and 12-17 have been amended.

3.   Claims 1-23 are pending.

Specification

4.   The specification filed on 24 November 2004 has been accepted by the

Examiner.

5.   With regards to claims 6-7,9, and 16, the informalities have been corrected and

are accepted by the Examiner.

Drawings

5.   The drawings were received on 24 November 2004. These drawings are

acceptable.

Response to Arguments

1.   Applicant's arguments filed 24 November 2004 have been fully considered but

they are not persuasive.

2.   Referring to the rejection of claims 1 and 13, the Applicant contends and argues

that the prior art Shambroom does not teach nor disclose effective user id or root-only

readable files including one or more security keys. The Examiner disagrees and asserts

that Shambroom does teaches means for an effective user id which is a Kerberos user

principal name which is defined as login information prior to authentication as shown in

Column 10, lines 39-41. After authentication is performed, the key distribution center

maintains root-only read access to the private key, by incorporating a permission

indicator which encrypts the private key, therefore, the client is able to authenticate itself with the KDC after verification is successful, and the contents of the private key are accessed by the client which include one or more security keys, i.e.) client user key, client secret key, KDC private key, KDC session key, as shown in Column 10, lines 43-67 and Column 11, lines 1-41..

3.   Referring to the rejection of claim 17, the Applicant contends and argues that the prior art Shambroom does not teach nor disclose effective user id or root-only readable files including one or more security keys. The Examiner disagrees and asserts that Shambroom does teaches means for an effective user id which is a Kerberos user principal name which is encrypted as login information prior to authentication as shown in Column 8, lines 19-26. After authentication is performed, the key distribution center maintains root-only read access to the private key, by incorporating a permission indicator which encrypts the private key, therefore, the client is able to authenticate itself with the KDC after verification is successful, and the contents of the private key are accessed by the client which include one or more security keys, i.e.) client user key, client secret key, KDC private key, KDC session key, as shown in Column 8, lines 27-54.

4.   Therefore, the rejections of claims 1-23 are maintained in view of the reasons above and in view of the reasons below.

DETAILED ACTION

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-16, and 20-23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Shambroom (U.S. Patent No. 5,923,756) and further in view of Schell

et al. (U.S. Patent No. 6,615,350).

Regarding claims 1,6,9, and 16, Shambroom teaches a method for persisting

and recovering

security keys in order to authorize a daemon or a command-line interface ("CLI")

comprising:

reading, with root as an effective user id, one or more security keys into a cache,

wherein the root enables the reading of files including the one or more security keys

(col.10 line 55 thru col.11 line 7),

attempting to retrieve a private key from the cache using a real user id, wherein

the cached certain security keys may include the private key (col.11 lines 12-13); and

determining if the private key was retrieved from the cache, wherein a failure to

retrieve the private key from the cache indicates that authorization failed (col.11 lines

44-46).

Shambroom does not teach the private key may be used to digitally sign a

message, compare the message signed with the public key to the message copy signed

with the private key, nor determine if the message is authorized based on the

comparison of the message signed with the public key to the message signed with the

private key. Schell teaches the private key may be used to digitally sign a message

(col.17 lines 16-18). Schell teaches using the digital signature, comparing it to the

message copy signed and determining the authorization. (col. 17 lines 42-67, col. 18,

line 1-37, col. 19, lines 33-41 and col. 20, lines 67 thru col.21, lines 1-24) It would have

been obvious to one of ordinary skill in the art at the time of the invention to combine

Shambroom's method for providing secure remote command execution with Schell's

module authentication method in order to allow a sender and receiver of a

communication system to verify the integrity and authenticity of messages sent (Schell

col.3 lines 1-9).

Regarding claim 2, Shambroom and Schell in combination teach the method of

claim 1, in addition Shambroom teaches setting, with the root as the effective user id,

the certain security keys, wherein the setting step triggers performance of the reading

step (col.10 line 55 thru col.11 line 7).

Regarding claim 3, Shambroom and Schell in combination teach the method of

claim 2, in addition Shambroom teaches calling a setKeys method, wherein the setKeys

method includes the reading step (col.10 line 55 thru col.11 line 7).

Regarding claim 4, Shambroom and Schell in combination teach the method of

claim 3, in addition Shambroom teaches failure to retrieve the private key from the

cache is caused by an error in the setKeys method (col.11 lines 44-46).

Regarding claim 5, Shambroom and Schell in combination teach the method of claim 2, in addition Shambroom teaches entering the CLI, wherein the CLI is entered by a non-root user on a managed node and the private key is a security key of the managed node (col.11 line 64 thru col.12 line 25; col.12 lines 43-54).

Regarding claim 7, Shambroom and Schell in combination teach the method of claim 6, in addition Schell teaches wherein the message comprises an executable, the method further comprising: if the message is authorized, executing the executable (Schell, col. 14 line 22 thru col. 15 lines 1-6).

Regarding claim 8, Shambroom and Schell in combination teach the method of claim 1, in addition Shambroom teaches running a daemon process, wherein the daemon is run on a managed node and the private key is a security key of the managed node (col. 11 line 64 thru col. 12 line 25., col.12 lines 43-54).

Regarding claim 10, Shambroom and Schell in combination teach the method of Claim 1 in addition Shambroom teaches the reading step is performed by an authentication class (col.8 lines 1-43).

Regarding claim 11, Shambroom and Schell in combination teach the method of claim 10, in addition Shambroom teaches the cache is a private variable in the authentication class (col.8 lines 42-54).

Regarding claim 12, Shambroom and Schell in combination teach the method of claim 1, in addition Schell teaches generating a security key pair, wherein the security key pair comprises the private key and a corresponding public key (col.20 lines 44-49); serializing the security key pair as a key file (col.16 lines 26-29: col.16 lines 47-

54. col. 20 lines 44-49). Shambroom teaches storing the key file, wherein the reading step comprises de-serializing the key file and reading the key file into the cache (col.8 lines 42-54).

Claims 13-15 are substantially equivalent to claim 1-3 respectively, therefore claims 13-15 are rejected because of similar rationale.

Regarding claims 20-23, Shambroom teaches the method of claims 20-23, but does not teach the authentication class is a Java class running in a Java Virtual Machine, the method further comprising: initializing the Java Virtual Machine. Schell teaches the authentication class is a Java class running in a Java Virtual Machine, the method further comprising: initializing the Java Virtual Machine (col.31 lines 15-21). It would have been obvious to one of skill in the art at the time of the invention to have combine Shambroom's secure communication method with Schell et al.'s module authentication and binding library extensions systems in order to provide a real-time challenge which protects against unauthorized users. (See Schell et al., col. 10, lines 41-57)

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by

Shambroom ((U.S. Patent No. 5,923,756).

Regarding claim 17, Shambroom teaches a method for persisting and recovering

security keys in order to authorize a daemon or a CLI, comprising:

initializing an authentication class, wherein the authentication class comprises a

setKeys method that includes a reading step ;

calling, with root as an effective user id, the setKeys method of the authentication

class, wherein the toot enables the reading of files including security keys;

reading necessary security keys into a cache with the root; and

retrieving the necessary security keys from the cache using a real user id (col.8

lines 1-54).

Regarding claim 18, Shambroom teaches the cache is a private variable in the

authentication class (col.8 lines 42-54).

Regarding claim 19, Shambroom teaches the necessary security keys are a

private key of a managed node on which the authentication class is running (col.12

lines 43-55) and a public key of a central management server to which the managed

node is operatively connected (col.10 lines 25-35).

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney D. Fields whose telephone number is 571-272-3871. The examiner can normally be reached on Mon - Thurs. 6:00 - 4:00 pm; off every Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2137

cdf
April 3, 2005

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER